THE AUSTRALIAN ACCOUNTANT

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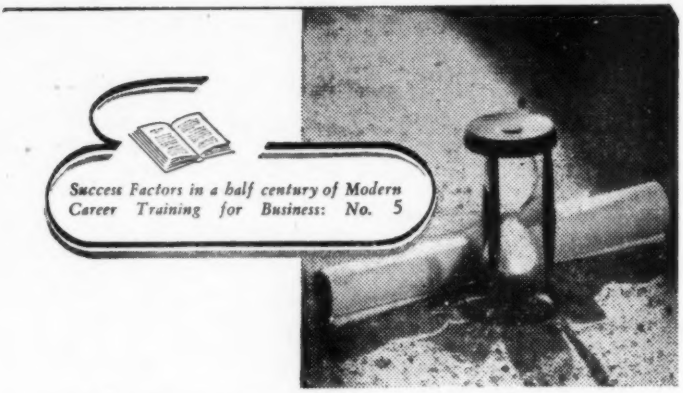

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THE PROFITGRAPH

by

WALTER SCOTT, F.I.C.A., F.C.A.A.

The May, 1948, issue of *The Australian Accountant* contains an article entitled "The Profitgraph, Sales, Costs and Profits," by G. T. Webb, B.Com., A.I.C.A., A.C.A.A., A.C.I.S., and in this article there are a number of statements which, in the opinion of the writer, appear to require further examination.

Some of these, to which attention can be drawn and which it is proposed to analyse, are as follows:

> In its usual form, e.g. figure 77 in Cost Accounting by Dohr and Inghram, the profitgraph imparts a psuedo-scientific atmosphere into the text where it is introduced, indicating a definitiveness in the amount of profit obtainable with varying levels of output which could not occur in practice. (Page 137.)
>
> . . . and it is therefore necessary to draw the attention of accountants to the principles underlying the construction of this diagram, an examination of which shows that the results imputed from the diagram are invalid. (Page 137.)
>
> Professor Prest's lecture on 19th November, 1947, to the Australasian Institute of Cost Accountants at Melbourne, on "The Influence of Volume on Cost, Price and Profit," should have a salutary effect in checking the use of this fascinating but misleading diagram. (Page 137.)
>
> One result of this lack of reconciliation in the past is that the topic particularly covered by the profitgraph—the expansion of output by a firm beyond normal—is treated in one way in accountancy textbooks and in exactly the opposite way in economic textbooks. Both cannot be right, and it appears necessary for this particular section in cost accounting textbooks to be corrected. (Page 138.)
>
> There is no quarrel with assumptions 1 and 2, but apparently the cost accountants have not looked beyond assumptions 3 and 4 to the ultimate results; namely, that the firm first in the field, or first to realize the position, could expand output indefinitely and so capture the whole market. (Page 139.)

Mr. Webb also gives a number of quotations from books on Economics in which an attempt is made to explain how he arrives at some of these conclusions. It will be recognized, however, that Mr. Webb's statements are extremely dogmatic: "which could not occur in practice"; "which shows that the results imputed from the diagram are invalid." "It appears necessary for this particular section in cost accounting textbooks to be corrected."

It surely follows that, if these statements are to be accepted, one must be very sure that one is right, and the arguments advanced in the article and the quotations made from books on Economics are not, in the writer's opinion, nearly sufficient to indicate that the case, as stated, has been proved.

Indeed, it is quite possible that Mr. Webb has read into the statements quoted from such book the conclusion he wants to reach because some of the quotations at least are insufficient to prove his contentions, and many indeed show that there is not such a gap between the cost accountant and economist as Mr. Webb would have us believe.

Furtheremore, it may well be that the truth of the whole matter is that the cost accountant will agree with the economist,

The Profitgraph—continued.

given certain factors. It must be recognized, however, that in many cases the cost accountant, at least as far as the article under review is concerned, may be dealing with entirely different situations.

Let us first of all take the statement that there is a pseudo-scientific atmosphere in the profitgraph. Few, if any, cost accountants intend to convey such an atmosphere. They are too conscious of the great difficulties attendant upon any effort to read the future—because, under the major form as we know it here in Australia, this is what the profitgraph attempts to do. It is closely allied to, if not a form of flexible budget, and the idea of projecting figures into the future is to attempt to examine and analyse, and, if need be, live up to the figures displayed. The whole idea behind the profitgraph is to show what the position should be under certain given circumstances, and then to attempt to mould the operations of the business to conform with the required profitgraph position.

It appears, however, that the major quarrels with the profitgraph are to be found in items 3 and 4 on page 139. These are the assumptions marked:

> 3. That this increased turnover can be obtained at the same selling price, and
> 4. That this increased turnover can be obtained without increasing the ratio of selling expenses, that is, the variable expenses (including advertising and selling expenses) increase in the same proportion as the output.

It is difficult to understand how Mr. Webb can really arrive at the conclusion that the cost accountant adopts these outright. It must be admitted that there are many conditions where these statements may be true, as far as they go, and in relation to a particular business, but for any cost accountant to say that they are universally true, and that the profitgraph is based on these assumptions, seems to show that the true idea of the profitgraph is not understood.

Let us take the first one:

> This increased turnover can be obtained at the same selling price.

It must be granted that in the main in dealing with a business and in preparing a profitgraph, the cost accountant is mainly concerned with what management desires in the way of an increase in turnover, and that this amount would probably represent quite a small increase proportionately. This is where one of the main difficulties which Mr. Webb sees is to be found. The quotations in relation to the economist mean that the turnover is being skyrocketed or projected into very big figures, but a cost accountant very rarely indeed would meet such a case, and, if he did, he would take all the circumstances into account in preparing the profitgraph.

In virtually every case the cost accountant deals with, at most, about 50% to 100% expected sales. In many cases this may mean, in the case of a small business, from £25,000 sales to £50,000 sales. In the case of a large business it may involve the difference between £1,000,000 turnover and £2,000,000 turnover (though this would be most unusual), but in the majority of cases the increase is kept to approximately 20% or 30%, because this is the margin which is under consideration at the time. In other words, a business does not go in one year from one million to twenty million turnover. If the special turnover possible in an industry was twenty million, and a concern was already getting one million. the argument of the economist would be perfectly true and, I think, would be subscribed to by any cost accountant. But it would be foolish to say that any cost accountant has to deal ordinarily with the situation which would take sales more than, at most, from one million to one million two hundred thousand or one million five hundred thousand (except possibly as a phenomenon), in one particular year.

In other words, the increase in turnover is within certain limits which make the profitgraph a tool of management which is worth a great deal. One would not for one moment subscribe to the viewpoint that the profitgraph ought to be prepared for a concern which expected its sales to go from one million to twenty million in the one year. The difference between the situation envisaged by Mr. Webb in applying economic theory and the practical case with which the cost accountant deals is best shown in terms of a graph.

But it goes deeper than this inasmuch as, even in sales of twenty-five thousand pounds to fifty thousand pounds, or one million to one million and a quarter, for instance, the question of the selling price

The Profitgraph—continued.

may quite well be taken into account by the cost accountant, and it is puzzling to understand why Mr. Webb feels he must make the point so strongly that the increased turnover may not be obtained at the same selling price.

It is extremely difficult to follow the argument he advanced in this case, because a few words earlier he has made a quotation from a lecture which the writer gave on Differential Costs, and included are the words, "the effect of a reduction in sales price." It is rather interesting to note that the other parts are put into italics, but not this part! Why would a reduction in sales price be mentioned except for the reason that increased (or even decreased) turnover may be obtained at the same selling price?

If further proof of this point be required it can be found in numbers of places where the profitgraph is dealt with. Mr. Webb quoted Knoeppel as originating the profitgraph. On pages 32-34 of Knoeppel's *Managing for Profit* there is a section on "Price Reduction to Increase Volume," from which the following is quoted:

> "To back up his contention as to product pricing, and remembering that on many occasions in the past the executive has voiced his conviction that greater volume would result in increased profits *if prices were reduced*, the controller asked the executive to give more than the ordinary amount of attention to figure 12."

Now figure 12 is a figure showing the Profitgraph and the influence of price reductions on location of profitless points. It shows the effect of a decrease of 5%, of 10%, or 15% and 20% in the price of the sales. Some of the comments are:

> "Price reduction would probably increase volume, but it would also increase our losses at the present time unless the volume increase was much higher than we have any right to expect."

He then goes on to show what would be the effect, for example, of a 10% reduction in price and an increase in turnover. In this connection he also shows that each price cut raises the variable cost relation to sales from 70.585% to 74.3% in the case of a 5% reduction; to 78.43% with a 10% reduction; to 83.04% with a 15%, and 88.23% with a 20% reduction. In figure No. 30 there is a very good illustration showing the effect of volume range on profits, and this, it is thought, may be very similar to what Mr. Webb felt that the cost accountant does *not* do.

In *Economics of Business Enterprise*, by Rautenstrauch (pages 238/9) the following appears:

> "The use of a chart of this character, to show the effects of certain changes in income and expense, requires a somewhat different procedure from that indicated above for charts constructed with the base in terms of plant capacity utilized or in units of product. For example, using the above data when the output is 2,500,000 dollars sales value as at 'A' in Figure 27, the income is, of course, the same amount, and the total expenses are 2,250,000 dollars. But the total expenses, particularly the variable total expenses, are determined by the physical volume of output during a given time period. Hence, if there should be a drop in the sales price per unit of output, the point 'A' would move to 'A1' but the total expenses, since the volume of output is the same, would tend to remain at the same level . . . with such a chart a drop in unit selling prices would cause the line of total expense to lie above 'AB,' and an increase in unit selling prices would cause the line of total expense to be below 'AB'."

In figure 29 (page 243) there is shown a break-even chart, of a Natural Gas Pipe Line, and the operating revenue is not shown as a straight line but rather in the nature of a curve. The first 20% is a fairly straight increase, but after that, the curve is slightly rounded.

On page 257 there are specific examples relating to an increase in sales required to balance a specific reduction in selling price. It goes on to say:

> "The purpose of price reduction is usually to hold the market against competitors, or to increase volume of sales through offering more attractive prices than competitors. It also makes the product available to purchasers in the lower income classes. The pricing of the product is a problem continu-

The Profitgraph—continued.

ally facing the manufacturer. The Sales Department as a rule is asking for lower prices because it reduces the sales resistance. When price reductions are considered, the manufacturer is confronted with a number of problems. He may well ask himself, 'How much greater must the sales be to make the same profit? At what volume of sales will the business breakeven at the lower selling price?' Can he answer these questions intelligently if he does not know the economic characteristics of his business?''

The examples then show how this is done.

Page 252—

''When a business is operating at a uniform rate of production and sales, all the forces which are in action tend to adjust themselves to given levels of costs and to continue at the cost levels until the equilibrium is disturbed. The primary cause of the change is variation in sales demand. With a constant sales demand and rate of production, the controllable cost factors tend to stand at fairly constant levels.''

On pages 277 and 278 Rautenstrauch deals with the problem of Dumping, and shows what the position is where a man sells a certain proportion of his total output in his home market at a higher price than the price abroad. On pages 274 to 277 he also gives an analysis of a case where a big sugar company had certain by-products which affected the breakeven point. He shows what the position is, and then toward the end states that:

''If the price of sugar should drop to 5½ cents per pound, it could be determined from the curve that the breakeven point would then be between 170,000 and 180,000 tons of beet per annum. If the price had dropped to 5 cents, there would be a loss of .12 per pound if the mills were run at a capacity of 200,000 tons of beets per annum.''

In the 1940 Year Book of the National Association of Cost Accountants, there is an article by Harry Howell entitled ''Streamlining Your Overhead,'' and on pages 192 to 194 he deals with the Effect of Volume on Profits. It is interesting to note that he starts off by saying that it is an everyday business problem as to how the situation would be affected by (a) Change in Volume, (b) Change in selling price, (c) Change in direct cost of production, (d) Change in fixed costs, (e) A combination of changes. It is interesting to note that, in considering changes, the first two which are mentioned are changes in volume and selling price. In example 6a, Howell shows the result of an increase or decrease in volume, and example 6b shows the effect of an increase or decrease in the sales price.

In an N.A.C.A. Bulletin of July 1st, 1947, and in an article entitled ''The Profit Volume Relationship,'' by Charles H. Gleason, there is a consideration of certain laws of costs and profits which the author says should be clearly understood by management, controller and cost accountant. He goes on to say that these laws are:

1. A change in the amount of fixed cost which changes the breakeven point of operation but not the marginal income ratio or the progressive rate of net profit.
2. A change in the variable cost which changes the breakeven point, the marginal income ratio, and the progressive rate of net profit.
3. A change in the selling price has the same effect as the change in the variable cost.

He then explains what other changes there could be. In exhibit 8 (page 1345) there is a graph which shows the effect of change in variable costs or in selling price, and this is dealt with at some length on pages 1346 and 1348.

In the N.A.C.A. Bulletin dated April 15th, 1948, entitled ''A Case Study of Small Business Controls,'' by Clinton W. Bennett, there is a statement, ''A *must* for every small business is a breakeven point chart.''

He considers what happens when there is a decision to be made as to the desirability or otherwise of doing business with large volume buyers, and maintains that the breakeven point chart will show factually the effect of volume on cost and the place occupied in the cost structure by this type of chart. He then adds this very important statement:

''The important thing is to avoid the pastime too often indulged in, of

The Profitgraph—continued.

trying to sell enough goods at a loss to make a profit."

Here is an extract taken from "The New Meaning of Breakeven Point," by Fred Gardner, as given in one of the production series of the American Management Association (No. 177), and entitled "Production Costs and Breakeven Points." Dealing with the laws of profits, No. 3 states:

> "A change in the selling price changes the breakeven point and changes the margin of profit to a greater degree than the variable cost."

On page 23 there is a paragraph devoted to the effects of changes in costs and prices, and Mr. Gardner says:

> "I would like to impress you again with the changes which will come about in breakeven points when selling prices are reduced. This is one of the major fields for the application of breakeven points. How quickly and accurately can you predict the effect of profit changes or selling price changes on your breakeven point and on your profit performance?"

He then goes on to say:

> "From the information provided here, you can make all necessary types of comparisons because the combinations go in from a 10% decrease to a 10% increase in costs, and from a 10% increase to a 10% decrease in selling prices."

Ford, Bacon and Davis, Management Engineers of New York, have prepared a pamphlet on breakeven points, and on the first page there is a chart which is shown as the breakeven chart for a typical company. In this case, none of the lines are straight. They all curve a little, and the gross revenue line is a curve which takes into account a fall in total gross revenue after a particular point is reached.

On page 247 of *Budgeting and Budgetray Control* (Scott), the uses of the profitgraph are shown in eight categories. No. 5 reads:

> "To determine the amount of increase in sales necessary to balance a specific reduction in selling prices."

On page 250, the last section is devoted to "Estimating Results of Price Reductions." The author states:

> "It is sometimes necessary to ascertain the effect of a five per cent. reduction of price in a commodity where it is expected that such a reduction will mean an increase in sales. For example, if sales at present £80,000 could be increased by £20,000, but if prices were reduced by 5%, would this be worthwhile, assuming a variable expense rate of 70%?"

It shows that the net gain in profit in this particular case given these figures would be £1,000 in making this reduction. The author goes on to say:

> "It is frequently not realised what a difference to profits a reduction or increase in sales price can make. Where a business is obtaining a profit percentage of 35% and it decides to reduce the price, so that only 25% is obtained, the percentage increase in turnover necessary to keep the amount of profit the same would be only 40%."

In *Cost Accounting* (Scott) on page 452, three conclusions are drawn, and amongst these are:

> "1. That the effect of increased turnover on profits is determined by the amount of fixed costs and the percentage of variable costs.
>
> "2. That better prices would frequently give more satisfactory results than increased turnover."

And on page 454 there are, amongst others, two more which are applicable:

> "5. To determine the amount of increase in Sales necessary to balance a specific reduction in selling prices."

and—

> "7. To determine whether a large order at a cost price would be worthwhile."

Certain examples are given on page 455, and the first shown is the effect of an increase or decrease in sales price. On page 457 there is a section devoted to the effects of increased sales:

> "Knowledge of this principle is very valuable where a business is asked to take on extra production at cut results, e.g., an organization may be producing 12,000 units at the total cost of £20,000. The selling price of these units may be £2 per unit, giving gross receipts of £24,000 and a profit of £4,000. It may be approached to produce a further 6,000 units at the

The Profitgraph—continued.

selling price of £1/5/- per unit. The question is whether it should accede to the request."

The example then goes on to show whether it would pay to take this business or not, and obviously must take into account the curve in total revenue accordingly.

As a matter of fact, this section takes the subject a great deal further than was envisaged by Mr. Webb, for it goes on (page 458) to say:

> "Sometimes the stage is reached when it would not pay the organization to expand even if sales could be made at existing selling prices. If, in the above example, the fixed charges have increased from £8 to £15 the cost of the 26,000 units would be £41,000. Under these circumstances, the net profit would fall from its original figure of £12,000 to an amount of £6,500. What is more important is to notice that even if the 6,000 extra units had been sold at the existing selling price of £2 per unit, the net profit on the 26,000 units would still be smaller—£11,000 net profit for 26,000 units against £12,000 net profit for £20,000 units. Here again the question of extra capacity available would be taken into account in arriving at the figures."

Finally, on page 461, there is a section devoted to "Dumping." An example is shown of a business with 10,000 units with the selling price of £2 per unit, and it decides to dump 10,000 units in a foreign country at 25/- per unit. What is the effect, and should this be done?

We have already looked at the position as it is given by American and Australian authors. Here is a quotation from an English journal, *The Cost Accountant*, and is an extract from an article entitled "The Profit Structure," by D. S. Evans-Hemming, F.C.W.A. On page 88 the author says, when applying the formulae, the following rules should be observed:

> "3. Variations in sales prices affecting units and not necessarily total income, be treated as a change in variable costs.
>
> . . . . . .
>
> "5. If it is desired to increase profit volume, the increase desired should be treated as an increase of fixed cost and the first formula used.
>
> "6. If profit per unit is to be increased, use the second formula treating the rise per unit as a rise of variable unit costs."

These quotations (which could be supplemented by dozens of others) show that the cost accountant has not overlooked the importance of the sales angle and the fact that increased turnover cannot always be obtained at the same selling price. So much for assumption 3!

Assumption 4 deals with the question of the ratio of increased selling expenses in getting the extra turnover. Some of the above quotations have already dealt with this matter, but suffice it to say that the cost accountant would examine each case on its merits and decide that the position would come withone one of three categories:

(a) The selling expense ratio would increase in the same proportion as turnover;
(b) In a greater proportion; or
(c) In a lesser proportion.

He would then ascertain what was likely to happen and translate that into the profitgraph. He may well go further, however, and explain to management that unless the selling expenses were properly controlled, they may increase at a greater rate than output, and with management's concurrence he may prepare a sales expense budget designed to see that they do not do so. If he can keep the sales department to this budget, the result may be shown as a straight line in actual fact.

Mr. Webb goes on to say that:

> If the profitgraph as drawn is correct, there could be only one firm in each industry. (Page 140.)

It is probably true to say that few cost accountants could accept this statement, at least unreservedly, if at all, for two reasons. Firstly, in business, price, whilst a most important one, is certainly not the only factor. If, for example, one butcher could sell meat cheaper than another, it does not follow for one moment that he would get all the trade. This may be because he may not be able to get the supplies; because his quality is not the best; because of the distance the customer would have to travel; because the butcher nearest the customer, whilst charging higher

The Profitgraph—continued.

prices, is a particularly obliging man and attracts custom.

Mr. Webb goes on to say:

> The answer, of course, is that the revenue line and the cost line are not straight lines as shown on the profitgraph, but curves; and the U-shaped cost curve, while showing declining units costs at first must rise after a certain level of output has been reached.

It is hard to imagine why Mr. Webb should make this statement as being opposed to the viewpoint of the cost accountant, when so many books dealing with the profitgraph specifically take all these factors into account in arriving at conclusions. Indeed almost every textbook deals with the position of increased costs. One of the major aims of the profitgraph is to try and see that, with a rise in turnover, costs do not increase more than an allowable amount but, if they must do so, that the increase should be kept within bounds. This applies whether the increased costs represent selling costs (that is, selling expenses, and including advertising), whether it is production expense or, whether in fact, in order to cater for extra turnover, even an increase in fixed charges, is necessary. All these factors are catered for and are taken into account as affecting the profitgraph.

It is of interest to note in passing that the point of the curved line raised by Mr. Webb is quickly disposed of by Professor Prest, whose lecture, it will be remembered, Mr. Webb quoted as having a salutary effect in checking the use of the profitgraph. The position undoubtedly is that there is often a curve involved, and this is caused because all expenses are not truly variable. This is recognised by the accountant. Professor Prest refers to it as follows:

> "Some readers will probably object to the assumption of a clear-cut distinction between fixed and variable costs, and will point out that in practice it is often necessary to recognize the existence of an intermediate category sometimes known as variable oncost. This may be admitted, but I submit that a clear-cut distinction is logically valid provided that we confine our attention to the variations in production that are possible within a particular period of time."
>
> (Page 3, *Influence of Volume on Cost Price and Profit.*)

It is significant that Knoeppel in his *Managing for Profit* deals with this particular subject at some length. On page 122 there is a statement which is headed "Curve Versus Straight Lines."

> "Objection may be made to the procedure we advocate for trend determinations on the ground that they are in the form of straight lines whereas many costs and capital items are in the form of curves. Our contention is, however, that group straight line trends give an overall result that is approximately correct, with much less effort and in much shorter time and materially simplify the arithmetical calculations that are coming to be identified with what we call profitgraphing and capitalgraphing. As will be seen in a later section, different costs have different characteristics. Some will tend to follow straight lines; others will follow curves of different shapes; others will have trends in reverse progression to sales. In straightening all trends we may here and there sacrifice some accuracy. On the other hand, plus variations may be offset by minus variations, so that when brought together the result is fairly representative. There are exceptions to all rules, of course, but the straight line method will eliminate the necessity for what would otherwise be very complicated mathematical calculations known as exponential trends and second degree parabola trend calculations. It is granted, of course, that below a certain point we assume it to be a 25% capacity, the total cost line would tend to curve downwards owing to the fact that management would intervene and depress the fixed costs in the interest of economy. Also, that above a certain point we assume it to be 90% of capacity, the total-cost line will curve upward owing to the influence of what is known as the 'law of diminishing return.' Between these two points, however, a straight line is accurate enough for all practical purposes."

Knoeppel then goes on to a detailed analysis of "Minus" fixed and "Minus" variable values and to Plus or Minus Fixed Variables. The quotation need not be given

The Profitgraph—continued.

in full, but it does go into the whole subject to a detailed degree. It is of interest to note the "Law of Diminishing Returns," as this is the law which Mr. Webb maintains the economist recognizes but the accountant does not. As a matter of fact, if one examines the extracts given by Mr. Webb and these sections of Knoeppel, one is struck by the fact that almost the same language is used.

The secret of the whole matter lies in the fact that, as Knoeppel says:

> "Between these two points, however, a straight line is accurate enough for all practical purposes."

This comes back to the point made earlier that the business man and, therefore, the cost accountant is dealing with a situation where there may be a sales increase of, say, 20%. In order to take up a sales increase of 2,000%, the curve may have turned well downwards as far as revenue is concerned and turned well upwards so far as expense is concerned; but increasing the sales by a margin of 20% there is almost a straight line. This section of Knoeppel's well repays study as it may dispel any misunderstanding.

Let us now turn to the question of increased turnover without increasing the ratio of selling expenses (i.e., variable expenses) and the curved line. On pages 136 to 138 Knoeppel gives a series of situations to determine in respect of:

1. Reduction in Sales Prices—
   (a) to earn the same profit;
   (b) if sales are the same as before.
2. The effect of an increase in sales profit—
   (a) to earn the same profit;
   (b) if sales are the same as before.
3. The effect of changes in variable costs.
4. The effect of increasing capacity—
   (a) profitless point sales;
   (b) to earn same profit as before;
   (c) to earn one-third more profit;
   (d) profit at full sales increase.
5. The effect of a combination of changes—
   (a) profit on a new basis;
   (b) profitless point sales;
   (c) same profit as before;
   (d) to earn one-third more profit.

In the *Economic Characteristics of Business Enterprise,* by Rautenstrauch (page 265), there is a chart showing the shift in total expense of plant utilization. It will be seen from this that 20%, 40%, 60%, 80% and 100% of the expense is not shown as a straight line, though a straight line is superimposed graphed as well. On page 266 there is a chart showing "Mill Allowances for Control of Departmental Room Variable Expense," and the maximum and minimum are shown, together with a line which is accepted as the basis for the profitgraph. There is a slight curve in this line. In Figure No. 35 on page 268 there is a chart showing the control of salaries of the production department, showing the method of control for semi-fixed expense. Many expenses actually increase in the form shown in this chart and not as a curve and not as a straight line. Rautenstrauch gives several examples of the position where expenses are either increased or decreased, but he also goes much further. He assumes, for example, that a certain manufacturing business has a particular economic characteristic, and that the management decides to instal new machinery and revise its methods of production. Under these circumstances, it increases its total fixed costs but reduces its variable costs so that we have a position which is much more complicated than that outlined by Mr. Webb. Rautenstrauch shows exactly how the breakeven point reacts to such conditions. He goes further and shows the increase in sales required to justify the fixed charges due to plant expansion.

Howell in the 1940 Year Book of the N.A.C.A. (page 195) shows what the effect on income is as the result of an increase or a decrease, firstly, in variable costs and, secondly, fixed costs. As a further illustration he takes the position of a competitor with a heavier proportion of fixed costs who may have a different view of the desirability of more or less volume.

In the N.A.C.A. Bulletin of July 1st, 1947, "The Profit Volume Relationship," by Charles H. Gleason, there is a paragraph on "Laws of Costs and Profits" (page 41). The first two laws mentioned are:

> "1. A change in the amount of fixed cost changes the breakeven point of

The Profitgraph—continued.

operations, but not the marginal income ratio or the progressive rate of the net profit.

"2. A change in the variable cost changes the breakeven point, the marginal income ratio and the progressive rate of profit.

. . . . . .

"5. A change in both fixed and variable costs changes to a still greater point the breakeven point, the marginal income ratio and the progressive rate of net profit."

Surely these laws take into account the facts which Mr. Webb quotes. On page 1,344, further consideration is given to a change in fixed costs, and on page 1,346 a section is devoted to the change in variable costs. In both cases an actual illustration is given and a chart is drawn to set out the actual conditions.

In *Budgeting and Budgetary Control* (Scott), a departmental multiple budget is shown giving the expense for a particular department at capacities of 50% to 100% (page 232). An examination is also made of the variable costs, and in view of the remark of Mr. Webb about selling costs, attention is drawn to the following:

> "While Production expenses have in the main been mentioned, it must be realized that the selling expenses can also be divided into similar classifications. The salary of the sales manager would be a fixed expense. The salesmen's travelling expenses would be partly variable, and the salesmen's commission (if calculated purely upon sales made) would be true variable. If salesmen were given a retainer and a commission on sales, their total remuneration would be classed as fixed variable, the retainer being the fixed portion and the commission being variable. All of these expenses would, of course, be considered in relation to sales volume." (Page 238.)

In *Cost Accounting* (by the same author) a calculation is made of the effect of increased fixed costs and decreased variable costs. On pages 454-5 there is shown the effect of increase or decrease in variable costs, and also the effect of increase or decrease of fixed costs. In the next example there is the result of an increase in volume, an increase in price, a reduction in variable costs or a reduction in fixed costs, the object being, in all cases, to double a particular profit. If, however, further indication is required that the cost accountant does understand the point which Mr. Webb has raised, and indeed has shown in clear and unmistakable terms that this can where necessary be taken into account, he is referred to page 459, in which there is a differential cost study shown of "shut down production," "60% capacity," "80% capacity," "100% capacity" and "120% capacity," the last named requiring additional facilities. In this he will see that the average cost per unit for 60% capacity is shown as £48/15/-, at 80% capacity as £39/5/-, for 100% capacity as £33/15/-, but at 120% capacity, because of an increase in fixed charges, it is shown at £37/1/9, an increase over the 100% capacity.

Cost and Production Handbook has already been cited by Mr. Webb, but he surely must have overlooked the paragraphs on pages 118 and 110 headed "Price and Volume."

This present articles goes to some length in contradicting what are, in the opinion of the writer, unjustified assumptions on Mr. Webb's part. This is, however, not nearly as much to prove Mr. Webb wrong as to remove any misconception relating to the profitgraph and breakeven point as it is of fundamental importance to us here in Australia to realise just what the profitgraph sets out to do and, furthermore, to show how valuable this knowledge may well be in the years to come. When the writer was in America, one of the most recurring topics heard in connection with anything to do with management and cost accounting was the slogan of "Watch your breakeven point." It occurs time and time again in conversations, in periodicals, in addresses. To illustrate this let me give you a few quotations at random which I think will set out the viewpoint clearly.

The first is taken from an article on the "Financial Aspects of Breakeven Points" shown in Financial Management Series Number 91 of the American Management Association, and the article is by George H. Braddock, who was for a period of years chief statistician and Assistant to the Director of Research for the National

The Profitgraph—continued.

Association of Manufacturers. As economic adviser to that body his outlook may well be akin to that of the economist. He says, "My specific topic is 'The Financial Aspects of Breakeven Points'." By a breakeven point is meant, of course, the point at which the factors of prices, business volume and business costs are so balanced as to return no net profit (or less) to the owners and proprietors of business enterprises.

In "Connecticut Industry," April, 1948 (page 8), there is a report of talk by Charles R. Stevenson, President of Stevenson Jordan and Harrison Inc., and one of the most widely known Management Engineers in U.S.A.

> "*Although it is safe to say that practically all of the nation's large industries have concerned themselves with the problem of how to lower their present high breakeven point,* there is a good possibility that some of the smaller companies, employing from 10 to 100 or even up to 300 or more persons, may not have had the time to give this vexing and threatening problem the consideration it deserves." (The italics are mine.)

It goes on to say that Stevenson believes that this problem of cost, prices and breakeven point deserves real study and planning to pave the way for possible periods of reduced demand.

In the April 1st issue of "The Institute of Public Service" by the National Research Bureau Inc., there is a paragraph headed "Breakeven point lesson—cut production — loss of prices." It states the breakeven point is constantly rising or falling in response to labour and materials, the most important variable costs when considering breakeven point. "One lesson that some employees will have to learn is that a cut of 25% prices with unit sales remaining unchanged will cause more substantial losses than a cut of 25% in unit sales with prices unchanged."

Alvin Dodd, while President of the American Management Association, spoke of the breakeven point in this way:

> "Nearly all companies know that the breakeven points are too high. But few of them have definite plans for bringing them down. In many cases, it is true that the task looks almost impossible, but no manager can afford to excuse himself from tackling it on that basis." (*A.M.A. Management News.*)

Here are a few quotations from "Production Series Number 177" of the American Management Association. The article is on "The New Meaning of Breakeven Points," by Fred V. Gardner. He says:

> "We need further interpretation of breakeven points and a better understanding of them in order to cope with this problem and play fair with helpers as time goes on. Bonus plans — for workers, sub-management, and management — will become more important, and this will make it increasingly harder to make reasonable profits. To do so, Management *must* use and understand the concepts of breakeven points."

In the same article, Gardner develops some laws of profits. He also studies very closely the results of 892 representative companies which reported to the Security and Exchange Commission. In this same article, results of this enquiry are shown.

(*All figures in Millions of Dollars*)

	Total Manufacturing	Postwar Total Manufacturing
Number of companies in group	892	900
Standby costs per year	$3,244.1	$500
Variable rate per $1,000 net output		$850
Breakeven point	$13,683.9	$30,000.00
% breakeven point to 1935-39 output	55.3%	100.00%
% standby to total cost at breakeven point ..	23.8%	15.0%
% standby to average business 1935-39	13.1%	15.0%
Average business 1935-39	$24,679.7	$30,000.0

(*Continued on page 79*)

The Profitgraph—continued.

For example, Column D shows that standby costs (time) have increased from \$3,244,000,000 to \$4,500,000,000 while Column E shows the variable rate to have increased from \$764 to \$850 per thousand dollars of net sales, resulting in a breakeven increase from \$13,683,900 to \$30,000,000 (Col. F). This mind you, is after the average selling prices have increased almost 30 per cent.

Summarized, breakeven points have more than doubled while selling prices have gone up almost one-fourth. Column J of Schedule A indicates the gravity of this last statement. Actually, these companies did \$24,679,700 in volume in the average year 1935-39. To-day these same goods would bring \$30,000,000,000 in income—an amount equal to the present breakeven point of these companies (Col. F, line 33). To say we have not a Herculean task to perform in controlling our breakeven points would be a gross understatement of the facts, for it is going to take a pretty large sized bulldozer to move the pile-up and accumulation of debris. And it will be very pathetic if we wait too long to get started. If space permitted, I could show the tremendous losses which accrued in the period between 1929 and 1932, resulting entirely from our inability to keep variable cost reduction in line with falling volume. These failures of management resulted in lags which cost millions of dollars in losses. In fact, it was well into 1932, when many companies were faced with sheriff's sales unless they started to perform, that managements were able to catch up with variable cost reductions necessary to support reduced levels of output, and this resulted from pressure exerted by stockholders and directors. This can happen again, and the sad truth is that it will! (Pages 16-17.)

> "A must for every small business is a breakeven chart."

It is interesting to note that the 1948 Annual Conference of the N.A.C.A. had as its subject for Tuesday morning, June 22nd, "Your Breakeven Point Today and To-morrow:

"1. In the distribution field.
"2. In consumer goods manufacturing.
"3. In capital goods manufacturing."

Let me now deal with a somewhat different aspect.

There are two types of breakeven charts. One is the type which projects after the style of a flexible budget, the figures relating to profit turnover and costs, and part of its essential characteristics is dealing with future possibilities and setting up a guide for the use of management.

The other type is virtually an historical analysis which sets down the path which the company or organization has trodden, and seeks to establish a behaviour pattern which is interpreted in terms of a breakeven point.

The first of these is the one with which we have been dealing and which was largely developed by Knoeppel, and to which he gave the name of the "Knoeppel profitgraph."

The second of these is best illustrated by Rautenstrauch, and his analyses are well worth consideration, particularly as there are many more examples of the first type than the second. For this latter type, those who are interested are referred to the first five excellent illustrations given by Rautenstrauch in his book *The Economics of Business Enterprise,* and found on pages 292 to 337. Particularly is attention drawn to pages 293 to 296, which deal with General Motors Corporation.

Based on a breakeven chart, Rautenstrauch estimated the expense for a particular period would be 989,065,755 dollars, while the actual expense was 988,210,920 dollars. This means a variation of less than 1%. In the following quarter, that is the first quarter of 1936, the estimate of expenses was 287,349,000 dollars. The interesting part about this comparison is that the estimates as to the amount of expense which should have been involved were taken out before any actual figures were available. The minute amount of the discrepancy is a solid commentary upon the accuracy of the prediction. It is only fair to mention, however, that this certainty of operating to which Rautenstrauch ascribes the accuracy of judgment is not always possible. (The italics are mine.)

In another place (*Principles of Modern Industrial Organization,* pages 270-272), Rautenstrauch investigated the affairs of the U.S. Steel Corporation for the period 1919 to 1927. He first of all drew up a breakeven point chart and then showed the

The Profitgraph—continued.

amount of the profits (earnings as he calls them), which should have been reached in various years according to the breakeven point. Against these he shows the actual result and threw up the differences. In all, his margin of error in average was .03%.

In the case of the U.S. Steel Corporation, for the period of 1919 to 1927 the differences between actual earnings and those computed by the above equation are as follows:

Year	By Equation	Actual	Difference
1919	$131,711,600	$147,672,000	+$15,960,400
1920	193,095,400	191,723,000	— 1,372,400
1921	39,350,000	47,030,000	+ 7,680,000
1922	60,539,600	59,740,000	— 799,600
1923	156,282,800	164,317,000	+ 8,034,200
1924	94,742,200	83,806,000	— 10,936,200
1925	123,301,000	109,528,000	— 13,773,000
1926	143,615,200	142,134,000	— 1,481,200
1927	104,078,600	100,490,000	— 3,558,600
TOTAL	$1,046,716,400	$1,046,440,000	— $276,400
Average	$116,301,822	$116,271,111	— $30,711 (— 0.03%)

While the maximum difference in any one year varied from approximately + 10% to — 12.5%, the average difference for the entire period was only — 0.03%.

It may be objected, however, that all of these quotations and contentions are from accountants and simply serve to show that the accountant should alter his technique. That is not so, as the quotations given come from cost accountants, engineers, management consultants and businessmen. But as Mr. Webb has raised the issue of the Economist, it is rather interesting to note this very recent quotation taken from an address at the Sixtieth Annual Meeting of the American Economic Association by Professor Joel Dean of Columbia University—an economist of wide repute—as reported in the May, 1948, issue of the *American Economic Review*. As will be seen, the summary quoted is the result of a complete review of the whole subject of the profitgraph, the article being entitled "Cost Structures of Enterprises and Break-Even Charts." (The writer has specially included the paragraph on Summary of Limitations so as to present both sides of the case, though the quotation thereby becomes somewhat lengthy.)

> "The projection of the short-run, static profit-output function of break-even charts is not a reliable forecast of future profits. The break-even point indicated by charts presupposes continuation of to-day's relative prices and expenditures patterns. Hence it does not accurately forecast the probable future break-even point in the event of a business decline. A break-even chart is an over-simplified analysis of expected profits at various levels of output. The basic premise that profit is a single-valued function of output is wrong. Profit will, of course, vary with changes in output, but it also will vary with changes in production plans and in the intensity and kinds of selling efforts. The profit function will also be buffeted about by the vast impersonal forces of the market. Hence, at best, any single break-even chart can only show profit expectations under a single set of assumptions regarding external market conditions and internal management strategy.
>
> "In typical break-even analysis, the static cost function has not been determined with much precision. Concentration on short-run cost functions has led, moreover, to neglect of other elements of the enterprise cost structure, which impairs the accuracy of projections of the short-run cost function. Changes in the composition of demand and in costs and in prices are, moreover, likely to be highly correlated with the firm's output. Despite rigidities of prices and of wage rates,

The Profitgraph—continued.

a decline in general business activity will shift the functional relationships that were presumed to be independent.

"IV. *Usefulness of Break-even Analysis.* The empirical short-run profit function has more stability than the foregoing discussion of its limitations might imply. One reason is that shifts in the cost function tend to be accompanied (with some lag) by similar changes in selling prices in many imperfectly competitive enterprises. This is partly the result of the use of cost-plus formulas to set and adjust prices. Another reason is that the pressure for efficiency is intensified in periods of adversity. The controllability and postponability of expenditures can, in some degree, compensate for uncontrollable shifts in selling prices and stickiness in factor prices.

"Under modern competitive conditions, selling price and the intensity of selling efforts are not normally adjusted frequently to short-term shifts of the firm's demand. Hence the assumptions of constant selling price and essentially passive selling cost adjustments are more realistic and useful for short-run adjustments under normal conditions than economic logicians might think.

"*Contributions to Economic Analysis.* Break-even analysis can make solid contributions to the development of enterprise economics. The importanee of fixed costs makes total cost and profits vary significantly as a function of out-put rate. Projections of this short-run relationship can be useful. Break-even charts and flexible budgets have been responsible for a vast amount of inductive investigation of the short-run cost and profit functions which dwarfs the pitifully few empirical studies made by economists.

"This kind of analysis can also provide insight into the bases of business decisions which should lead to re-examination of some tenets of received doctrine. For example, it provides added evidence that cost behaviour patterns in a modern enterprise differ in important respects from the theoretical model, that knowledge of these behaviour patterns by management is far less precise than assumed, and that the things maximized by business executives may differ greatly from theoretical assumptions.

"*Managerial Usefulness.* Ambitious claims have been made concerning the managerial usefulness of break-even charts. They include not only profit projections but also expense control and price determination. For these added purposes, as for profit projection, the limitations discussed above impair but do not destroy its usefulness.

"Empirical cost functions can be highly useful for expence control. But for this purpose they must deal with components of cost, and should be confined to those costs that are controllable at each area of responsibility. Although this kind of flexible budget may be built up to a break-even chart, it is not a by-product. Thus conceived, the break-even analysis no longer concentrates on the break-even point or on a single static profit function. Instead it provides a flexible set of projections of costs and revenue under expected future conditions and under alternative management programs. Profit prediction under these multiple conditions becomes then a tool for profit-making."

The writer asks forgiveness for setting the foregoing position out in such a detailed manner. It is regarded as highly important, however, and it is felt to be of major importance that a true knowledge of the characteristics and potentialities of the breakeven chart should be clearly understood.

It may well be, however, that some may consider themselves unconvinced. With them, I must take refuge with the bumble bee.

> "By every principle of aerodynamics and all known practical tests, including wind tunnel and other methods, the bumble bee cannot fly. But it does."

Perhaps the breakeven chart shouldn't work. But, with careful thought and preparation, **IT DOES.**

PROBLEMS IN THE PRACTICAL USE OF STANDARDS

by

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(Being a Synopsis of a lecture delivered before the Australasian Institute of Cost Accountants (Victorian Division))

I do not think there is any need for me at this stage to dwell on the advantages to be gained from the installation of a standard cost system. This information is clearly set out in almost every recognised text book on Cost Accounting.

Therefore, leaving that side of the question to the experts, I intend to discuss with you some of the practical problems met with in conducting a standard cost system in a medium sized manufacturing organisation.

Those problems directly affecting (a) Preparation of Standards for Material, and (b) Preparation of Standards for Labour, have already been dealt with by previous speakers in this series, and I will therefore confine my remarks to specific problems arising out of the setting of standards for expense.

1. SETTING OF STANDARDS FOR EXPENSE.

A detailed examination of the cost factors in any organisation generally reveals that of the three items—material, labour and overhead, the last item is generally the most costly. It is also the most difficult to control owing to the wide-spread nature of the various items which go to make up the total. To illustrate this point, in the engineering industry, we find that so far as material is concerned we deal in tons of steel, in the textile industry we deal in pounds of wool, in building or furniture manufacturing, we deal in specific quantities of timber. So far as labour is concerned the problem is once again comparatively simple, for example labour rates are known and where piece work is in operation, standards can be set for various levels of productive capacity. We have in each case a physical volume which can be measured with reasonable accuracy.

However, when we come to the problem of expense we find that multitudinous items have to be taken into account, and in order to set standards, it is necessary for the Cost Accountant to consider in full detail every individual item. Some of these, of course, as you know, are fixed irrespective of the rate of production, some vary directly in proportion to productive capacity, and others again vary, but not directly in proportion to productive capacity.

Then again we have the factor that expense is not met with only in connection with the specific manufacturing of any particular item, but it is met with all the way through from the point of ordering raw materials to the time when goods are manufactured from these raw materials and are then sold, distributed and finally paid for by the customer.

We see firstly that the control of expense by standards is most important owing to the fact that considerable sums can be either lost or saved on this particular item, owing to its importance in relation to the other cost factors, and secondly that of the three items comprising total cost, it is the most difficult to control owing to its ramifications right throughout the manufacturing and selling organisation.

Many decisions have to be made before expense standards are finally set, some of these being:

1. Rate of production, and whether standard expense rates are to be fixed on any of the following levels of activity:
   - (a) Expected actual;
   - (b) Desirable actual;
   - (c) Expected normal;
   - (d) Capacity to produce;
   - (e) Capacity to sell;
   - (f) Normal level for the industry;
   - (g) Long term average.

Setting Standards for Expense—continued.

2. Whether all items of expense are to be kept to a minimum or whether owing to economic circumstances, it will be possible during the forthcoming period to include any exceptional expense.
3. Whether standards are to be set for expense by processes or on the units produced.
4. The period for which standards are to be set.

The general text book answer to those problems arising out of the varying levels of activity as set out under item 1 above, is the installation of a "Flexible Budget" by which unit standards are fixed for the varying rates of production. However the preparation of flexible budgets involves a terrific amount of detail work, particularly in an organisation with a large number of manufacturing departments and turning out a comprehensive range of products. You can imagine the difficulties involved in preparing detailed flexible budgets for each department in a textile mill in which raw greasy wool is treated right throughout the various processes to the finished cloth stage. Some 15 main manufacturing departments are concerned and in addition there are numerous cost centres and services to be taken into consideration.

Hours	5,180
Level	70%
Expense (monthly)	£650
Standard per hour	2/6

Budgetary control is then generally applied by one of two methods:

1. The supervisor of the screw machine center is instructed, for example, that expected activity is 70%, and at that level allowable expense is £650 per month. It can be emphasized that the budget, to control, must be fixed at the time and point of application, or
2. The supervisor is presented with the budget scale and told that if the level is 70%, his expenditure may be £650 per month and if 100%, £950 per month. Even if activity should turn out to be 70% it is nevertheless required that the supervisor himself, estimate that operations will be at this level, and so arrange service expenditures. When the expenditures become a "fait accompli" it is too late to meet the level which reflects actual operations.

An article appeared in a recent issue of the N.A.C.A. Bulletin, entitled "A Case Against Flexible Budgeting", and I will take the liberty of quoting to you some of the text of this article:

"It may well be time to drop the flexible budget. Effectiveness of this management technique can be freely questioned in its applications to post-war industry. Championed as one phase of the extension of the principles of science to the field of business control, the variable budget, proved to be adapted to conditions of the nineteen thirties, found itself in conflict with war-time requirements for a retained work force, and is today in possible juxtaposition to sound business planning. The objection is not only failure to achieve control, although a strong case can be made on this point, but failure of the concept of variability as a management policy."

Is there or can there be a flexible budget? At the point of application to operations one is hard put to find the evidence of change or variability in costs. For example, the budget of a screw machine centre may show the following data:

5,930	6,670	7,400
80%	90%	100%
£800	£875	£950
2/8½	2/7½	2/7

It can therefore be pointed out that the budget may be called variable, yet as applied it must be fixed either for one week, one month, one quarter, or perhaps one year if any reasonable control is expected.

Creation of the truly varying budget is handicapped far beyond the difficulties arising from point of time of determination of the operating level for, although in theory expenses may rise and fall as clearly as the column of a barometer, the practical picture may be different."

The answer to problem (2) above will be governed entirely by economic factors—is the time opportune for a general plant overhaul?—should a major programme of building, repair, painting and the like be embarked upon etc.? If the demand for the product is good and the selling price is of no immediate object, many items of extraordinary expenditure can be absorbed

Setting Standards for Expense—continued.

in costs. On the other hand, when the market is keen and it becomes necessary to prune expenses, only those items which are essential will be included in arriving at a standard expense figure.

The decisions under item (3) will be determined by the nature of the work involved, and whether process costs, terminal or job costs are being used. Standard expense can be expressed as an hourly cost as in the case of fixing machine hour rates, as a percentage to labour for process costs, or as a cost per unit of production or job.

As to the period for which standards are set, this depends entirely on the wants of the organisation. As Mr. A. A. Fitzgerald said in his opening lecture, standard costs can be basic standard or current standard. If the basic standard is to be used, no variation will be made to the standard expense rate, but a variation figure will be prepared in order to take into consideration changed circumstances. In the case of current basic, however, the standard expense rate itself will be varied at the beginning of each budget period and if necessary a variation figure can also be introduced at some convenient point.

All of these decisions must be made before standards are set if proper control through standards is to be exercised.

2. PRICE CHANGES.

A very practical problem which is exercising the minds of most people using standard costs at the present time, is the effect on their standards of price changes of raw materials and/or operating supplies, which are outside the immediate control of the organisation. The main use of standards being one of control, some provision must be made by way of variation statements to cover those items which can and those items which cannot be controlled by the responsible officers in the organisation. Provision is of course made in the standard cost system for recording of buying variations, and any fluctuation in the landed cost of raw material would automatically be reflected in the amounts being charged to the variation account. However, the problem becomes greater when violent fluctuations occur which might even necessitate an immediate rise in the selling price, due to the fact that the current accounting period cannot afford to be charged with the whole of the additional cost of raw material purchases. In a like manner expense rates can also be affected by heavy increases in indirect labour rates, by increases in freight charges, by the use of more expensive substitute fuels, etc.

In periods of rising costs such as these, the Cost Accountant must be constantly watching his variation statements, and he must be prepared to make recommendations to the management when he considers that a price change is necessary. At this point it might also be advisable to vary the standard cost itself in order to make provision for the increased costs involved. If the latter course becomes necessary it might even necessitate a complete revaluation of work in process and finished goods, in order to adjust their cost to the new standard figure. I do wish to point out however, that this procedure would only be adopted in the case of very unusual circumstances.

3. CALCULATION OF ACTUAL COSTS.

Although Mr. Fitzgerald did say in his lecture that there was really no such thing as an "actual" cost, we as Cost Accountants do use the term, although I suppose that if we follow his argument to its logical conclusion we should use the term "theoretical actual" cost. Once again our basis of control is the comparison of our actuals with standard cost, and many problems can be met with in the computation of "actuals".

For example we have the age-old question of costing raw material, whether we use LIFO or FIFO, or average the cost of raw material purchases—changing circumstances might require a change of policy and such a change might have the effect of upsetting the standard material cost being used. Then again through some circumstance which was not foreseen at the beginning of the budget period, a considerable amount of idle machine time might be encountered for which no provision had been made in setting up expense standards. Unless action is taken to separate the actual cost of idle machine time from normal

Calculation of Actual Costs—continued.

manufacturing expense, the actual cost of manufacture as against standard will be unduly inflated.

Another problem arising out of the collection of actual cost is that of the introduction of large items of unusual expense during the budget period. If these are taken up in the accounts as cost items and the normal method of calculating actual cost is used it may be found that the resultant actual unit cost is not comparable with the standard already set. As an example, it may be that a decision is made to embark on a heavy programme on experimental and developmental work during the budget period, and it may be considered that the cost of this work is to be borne by current production. Naturally the additional cost must be taken up in the accounting records and unless some provision is made to treat it as a variation from standard, confusion will result from the control point of view. Again a decision might be made to increase the allocation being made for depreciation of plant and machinery owing to financial circumstances which may develop at some time throughout the budget period. If the increase is substantial and it is treated as part of the actual cost of production, once again it will have the effect of increasing actual costs to an extent which was not contemplated at the time the standards were set at the beginning of the budget period.

A change in manufacturing methods as distinct from those in use when the standard was set might conceivably have the effect of making a considerable difference in the actual cost of production, and if the standard cost system is to be of any practical use it might even be found necessary to create new standard costs to take care of the altered manufacturing procedure. This of course would be quite a major undertaking as far as the cost system itself was concerned, and it would only be undertaken under extreme circumstances.

The actual cost of raw material transferred to production is also another problem which might be met when, as mentioned earlier, the normal basis would be to charge to buying variation account any fluctuation in the price of raw materials purchased, thus bringing all raw materials in stock down to the common basis of standard cost. It might be argued however, that each accounting period should bear the actual cost of the raw material used instead of such additional cost being absorbed in the period in which the raw material is *purchased*. The whole question here is one of—what is the actual cost of raw material—purchased cost or standard?

These are all problems which may be met in the fixation of actual costs, particularly when emphasis is placed on the amount of variation between standard cost and actual cost.

4. INVENTORY PROBLEMS.

This is a phase of standard costs which can easily be the subject of a complete lecture such as this, so therefore I will endeavour to confine my remarks to the main problems as I see them.

Firstly of course, we have the well-known problem that the Taxation Commissioner, generally, will not recognise standard costs as a basis for pricing inventories. Some compromise may be made here by valuing raw material stocks at the lower of cost or current market value, and pricing work in process and finished goods at standard cost. If *current* standards are used and not *basic* standards, there will be more likelihood of the Commissioner agreeing to this method of inventory valuation.

Secondly, we have the problem as to what items of expense are included in our standard costs, and if inventory is valued at standard is it good policy to include them as part of the inventory value? For example our standard cost might include such items as research and experimental, idle capacity, etc., and it might well be argued that these items should be absorbed as expenses in the period in which they are actually incurred, instead of being spread over a number of accounting periods which could be the case if they were provided for as part of the standard cost used for the purpose of valuing inventories. In other words by including them in the inventory valuation they are being temporarily capitalised.

In a period of rising costs and where accounting procedure includes the pricing of inventory at standard cost, a book profit is automatically made on that amount of stock which has been carried over from an

Inventory Problems—continued.

earlier accounting period. On the other hand if costs are falling with consequent reductions in standards, inventory *loss* is incurred on those items of stock which are carried over. Inventory variations can also occur where standard prices are used for damaged or reclaimable goods, particularly where the quantity varies from the end of one accounting period to the next.

Where perpetual inventories are in operation, the question is—whether the monthly variations are recognised and treated as part of the standard cost. This question can be quite an important one, particularly where selling prices are based directly on standards and where inventory variations are of some magnitude.

Unless a continuous check is made of constructional details, and unless some water-tight method of reporting any alteration in the method of manufacturing is installed, inventory variations will undoubtedly occur. Actual costs of manufacturing will either be understated or overstated by reason of the substitution of materials of a greater or less cost than those included in the standard, or by a difference in the actual time taken to manufacture the article. For example in the manufacture of mens hosiery the standard might be based on a certain quality of count of yarn and later, through patterning changes, a substitution of a different quality yarn at a higher price might occur, thus the raw material inventory would, in book value, be overstated.

Also for inventory purposes a close check should be kept on the standard rate of waste as this too, will have an effect of varying inventory values.

5. CONCLUSION.

I do trust that as a result of tonight's discussion you do not go away with the idea that there are so many difficulties in the way of conducting an effective standard cost system, that it is not worth while. Quite the opposite! I am quite convinced that a properly instituted and conducted system of standard costs can be of inestimable value to management—but at the same time it *must be practical.*

The problems I have discussed with you are some of the practical problems which we have met, and which incidently we have overcome, and I hope that as a result of this talk some of your problems in the conducting of your standard cost system will be lessened.

ACCOUNTING PROBLEMS IN TAXATION RETURNS

by

A. S. Donnelly, A.I.C.A., A.C.A.A.

As taxation laws became more complex over the last two decades, more and more attention has been given to the effect of such legislation on commercial practices and procedure. To-day there is an abundance of literature and a growing body of specialist practitioners devoted to this subject. Taxpayer organizations and services supplied by publishers of text books keep tax agents and other interested parties up to date on current problems. Questions as to whether certain receipts are assessable, or payments deductible, the effect of taxation on proposed transactions, the relative economy of public or private companies as compared with partnerships, concessions granted to specified industries, all these and other points are questions to which answers are sought daily.

While it is important to see that specific phases of the financial operations are properly dealt with in preparing returns of income, there is another and perhaps equally important aspect. It is the need to ensure that the records on which the assessable income is based are correct. Of what use is it to follow the provisions of

Taxation Returns—continued.

the Act relating to, say, depreciation, amortization of lease premiums, etc., unless the more fundamental issues of gross and net profit are dealt with on correct lines? Or is it logical to expend much effort on claiming the benefit of special deductions, if this gain is offset by including as income an amount which has been overstated as the result of unscientific accounting?

It may be argued that most business concerns have systems of accounting for other purposes and that accuracy for taxation matters is thereby automatic. Though this is true of the medium and larger-sized commercial undertakings, there are large numbers of taxpayers notably primary producers and small-scale retailers, who are not in such a happy position.

Nature of the Problem

In the absence of double entry bookkeeping records, there is no means of verifying the correctness of statements purporting to show financial results. Returns prepared from such a base are only a form of guesswork. The following weaknesses are inherent:

1. As there is no balancing process, clerical errors can easily occur.
2. Without balanced figures of **capital** as well as revenue items, the significance of some transactions may be lost. For instance, parts of assessable income used to pay for private items (or capital purchases) may not be apparent as there is no true indication of private drawings, etc.
3. The vital accounting concept of matching costs and income is prejudiced. Unless those "swinging" items, e.g. amounts receivable and payable, remittances in transit, stock in hand, work in progress, etc., are accounted for as part of an **overall scheme** then any material variation in the amounts under these headings will cause misleading results to be shown.
4. Grave errors may result from failure to reconcile records with Pass Books.

Obviously then, some form of accounting technique must be employed. Yet it must be remembered that, more than ever, simplicity should be the keynote. Though designed to ascertain, in a sound manner, the results of the trading or other operations, the system does not require all the information which more elaborate methods envisage as necessary for presentation to owner, shareholders or management. Thus, such matters as detailed classification of expense on a functional basis can be ignored. If classification is based on the requirements of the Income Tax Return, then that is sufficient. The fact that a full accounting system is not in force may be an indication — though not an infallible one—that considerations of expense, difficulty of keeping records or other factors has prevented its adoption.

Fundamental Requirements

To be effective the system must provide for an account (or statement) to summarise income and expenditure of a Revenue nature and a statement showing the increases, decreases, and conversions of assets and liabilities. These, in accounting parlance, correspond to the Profit and Loss Account (perhaps with Trading Account) and Balance Sheet.

It may be that difficulties in the way of finding details of opening assets and liabilities prevent the use of a Balance Sheet. In these circumstances, an answer can be found in a form of Trial Balance which shows the **movement** in value of each of the constituent items rather than their value at the close of the period. This is illustrated later.

Having decided on the objective, it now remains to achieve this end with the minimum of effort. As much as possible of the detailed work associated with the mechanics of account keeping should be eliminated.

In comparing the requirements in this direction with standard accounting practice, there is one notable difference, i.e., for the present purpose no importance attaches to the effect on the accounts of transactions from time to time **during the year**; it is the result for the whole financial year which is of interest. Thus it is possible to eliminate the ledger which normally serves as a link between the books of prime entry and the final accounts.

Taxation Returns—continued.

For the same reason it is usually more suitable to work on a "cash" basis. Thus actual receipts and payments are posted to the summarizing medium (the Trial Balance and Profit and Loss Account) and an adjustment made for creditors, debtors, stock, etc. In the following year these entries are reversed and new amounts brought into account, and so on.

Detailed Records

It is apparent that the Cash Book will be the main and only important book. The withdrawals will, of course, be written up from the Cheque Butts and the Deposits from Receipt Books, Deposit Books, etc. Reconciliation with the Pass Book will ensure that the accuracy of the basic record is established.

In the case of primary producers, income is usually derived from comparatively few sources, such as butter factory, sugar mill, Wheat Board, wool selling merchants, etc. Hence it is often possible to use statements from these sources as the basis for the record of income. In this way, a check is provided on bank deposits; any proceeds of produce sales, etc., used for private or business should be revealed in total. Moreover those deductions from gross proceeds can be brought to account.

Where external evidence of income is not available, then the records must be based on Day Books, etc., kept during the year. So, too, expenses paid other than by cheque must be brought to account.

Where the taxpayer or the person who conducts his transactions is not the clerical type, then considerable bother can be avoided if he restricts his entry making to jotting names of payees and nature of expenses on cheque butts and details of cash payments on vouchers or in a rough memo. book (if necessary, income would be similarly recorded). Writing up and reconciling Cash Book can be left to one more familiar with bookkeeping methods.

Balancing Operations

Having reconciled the Cash Book, details of statements from those sources mentioned above should, where applicable, be summarized in this book so as to facilitate the posting of these items to the revenue and Trial Balance statements. For the same reason, totals of debtors, creditors, stocks, etc., should be entered therein, and all is set for posting of the summarized information.

Naturally, a multi-column Cash Book in which payments are progressively dissected is essential. If the totals are carried forward for the whole year then normally one column total is the extent of the postings to each item in the relevant statements.

An example of the Trial Balance Statement is set out in Fig. 1. This is but another form of the eight-column Trial Balance used as a work sheet in preparing final accounts. The arithmetical accuracy is finally established by the balancing of the debits and credits in the last column. However, the work can be progressively checked, as each column is self-balancing. Not only must the debits and credits in each column balance, but column totals can be checked against their source, as under:

Column 1 totals agree with sum of deposits and withdrawals.

Aggregate of gross sales of cream and fruit equals the totals in Column 2.

Totals of Cash Payments Summary agree with the third column.

The nature of the entries in the Adjustment Column is set out below:

(a) recording of interest due on loan;
(b) introduction of Sundry Debtors;
(c) introduction of Sundry Creditors;
(d) reversal of Sundry Debtors as at beginning of year;
(e) reversal of Sundry Creditors as at beginning of year;
(f) writing off depreciation on plant and motor truck;
(g) allocation of part of motor expenses and depreciation to private drawings;
(h & i) reversal of opening livestock values and introduction of closing values respectively.

Final Form of Statements

Livestock accounts would be shown in detail including numbers as well as values. The calculation of depreciation would be set out in the form of a schedule. Items in the Profit and Loss Account are transcribed on to the usual form of account from the appropriate column.

The movements in assets and liabilities are then set out on a Reconciliation of Profit as follows:

(Continued on page 89)

Taxation Returns—continued.

	£	£	£
Increase in Bank Overdraft			99
Increase in Plant and Machinery—			
Additions	164		
Less Depreciation	115		
		49	
Remittances in Transit—			
Cream		16	
Fruit		30	
Increase in Livestock on hand—			
Cattle		10	
Pigs		5	
Decrease in Sundry Creditors		5	
Loan from Repatriation Commission			137
Decrease in Motor Truck			30
Payments on Capital Account—			
Private Drawings		382	
Life Assurance and Medical Expenses		83	
Taxation		33	
NET PROFIT AS PER PROFIT AND LOSS ACCOUNT			347
		£613	£613

(For clarity of illustration, shillings and pence have been omitted from these statements.)

Application of This Method

It is not suggested that this system should replace accepted double entry practice involving the use of ledgers. Rather it is a means of applying the fundamental principles of double entry in the most simplified manner, and for one particular purpose.

If the number of adjusting entries tends to create confusion, then it is time that a ledger be introduced. In practice it has been found that the manner of working outlined above operates successfully in a vast number of cases.

Compared with the method, if such it may be called, of compiling Returns merely by dissecting and collating from single entry records, its superiority is unquestioned. Apart from the general need for accuracy there are these additional points:

1. Amount shown as private drawings can be compared with previous year's figures. Having regard to particular circumstances, this provides a useful general check against understatement of income caused by omitting proceeds applied to payment of private expenses.
2. The Reconciliation of Profit provides evidence that the taxable income has been calculated along sound lines. The Department can see at a glance that private and capital expenses are accounted for. Thus, the extra trouble and expense associated with questionnaires from the Commissioner is avoided.
3. Though designed for minimum taxation requirements, the system provides a nucleus of information from which a set of books can be opened with ease. (The inclusion of a column showing opening value of assets and liabilities in Fig. 1 would convert the final column into Balance Sheet figures.)

In these ways, this procedure can, at a minimum cost, solve a very real taxation problem.

STUDENTS' SECTION

Edited by O. R. MACDONALD, A.I.C.A.

FEDERAL INCOME TAX LAW AND PRACTICE

October, 1948, Examination — Model Answers

by

R. E. O'NEILL, A.I.C.A.

Question 1.

A Private Company is desirous of introducing a superannuation scheme for the benefit of its employees.

Advise it fully as to whether payments to the fund will be deductible for income tax purposes.

Answer 1.

There are two classes of allowances in respect of contributions to superannuation funds, namely:

(a) Payments which are made under a legal obligation which are deductible under s. 66. These are referred to as compulsory contributions.

(b) Voluntary contributions which are deductible under s. 79.

Section 66 (1) provides that where a taxpayer sets apart or pays in the year of income any sum as or to a fund to provide individual personal benefits, pensions or retiring allowances for his employees and:

(a) the taxpayer is under a legal obligation to set apart or pay that sum; and

(b) the rights of the employees to receive the benefits, pensions or retiring allowances are fully secured,

an amount ascertained as explained below shall be an allowable deduction.

Section 79 (1) provides that where a taxpayer sets apart or pays in the year of income any sum, not allowable in whole or in part as a deduction under s. 66, as or to a fund to provide individual personal benefits, pensions or retiring allowances for employees who are residents and are engaged in his or any business or class of business, or for dependants of such employees and the right of the employees or dependants to receive the benefits, pensions or retiring allowances are fully secured, an amount ascertained as explained below shall, subject to s. 78 (3) be an allowable deduction.

The qualifications for deduction of payments made under either s. 66 or s. 79 are *similar* in the following respects:

(i) The sum must be set apart or paid in the year of income;

(ii) The sum must be so set apart or paid as or to a fund to provide individual personal benefits, etc. A deduction cannot be granted where the fund is to provide collective benefits, etc., such as the provision of a gymnasium, library, sports club, social club, and the like;

(iii) The fund must be one to provide benefits, etc., for employees. For the purposes of both sections, a director of a company is deemed to be an employee of the company [ss. 66 (11) and 79 (10)].

(iv) The rights of the employee to receive the benefits must be fully secured.

The following are the essential *differences* between these two provisions:

(i) A deduction under s. 66 (1) is allowable only where the taxpayer is under a legal obligation to set apart or pay the sum claimed. The taxpayer need not be under any legal obligation in order to obtain a deduction under s. 79 (1).

(ii) Under s. 66 (1) the fund must be one for the provision of benefits, etc., only for employees of the taxpayer. Under s. 79 (1) the fund may be one to provide benefits, etc., not only for employees of the taxpayer but for the employees of any class of business (whether of the taxpayer or not) who are residents, or dependants of any employees (whether of the taxpayer or not).

(iii) Under s. 66 the payment may exceed the taxpayer's net income of the year, and the resultant "loss"

Students' Section—continued.

can be carried forward to subsequent years under s. 80. Under s. 79 this is not permissible, because s. 78 (3) applies to limit the amount of the deduction to the amount of the net income of the year.

The deduction permitted for compulsory and voluntary contributions respectively is the sum of £100 in respect of each participating employee, or 5 per cent. of the employee's annual remuneration, *whichever deduction is the greater*. The Commissioner has, however, a discretionary power to allow a still greater deduction.

Sections 66 (10) and 79 (9) provide that where any taxpayer, who has been allowed a deduction in respect of any sum set aside or paid as or to a pension, etc., fund, receives from that fund, during the year of income, a payment or other benefit which has a money value, his assessable income shall include that payment or the money value of that benefit.

Question 2.

Taxpayers, both individual and companies, are entitled to rebates in their assessments for certain gifts and mining calls.

Explain fully the bases upon which they are calculated.

Answer 2.

In the case of a taxpayer which is a company, gifts of the value of £1 and upwards of:

(a) money; or

(b) property other than money which was purchased by the company within twelve months immediately preceding the making of the gift,

made by the company in the year of income to any of the specified funds, etc., in Australia, are allowable deductions [s. 78 (1) (a)]. The value of a gift of property other than money is, for this purpose, the value of the property at the time of the making of the gift, or the amount paid by the company for the property, whichever is the less [s. 78 (2)].

In place of the deduction allowed to companies in respect of gifts, individuals are allowed a rebate of tax. The rebate allowed to individuals is ascertained by applying to the total of rebateable gifts the rate of tax plus 18d. in £, applicable to a taxable income from personal exertion equal to the total taxable income of the taxpayer. The sum of the rebates allowable under the Act must not exceed the amount of tax otherwise payable by the taxpayer. The sum of all the rebates allowable must be adjusted to the nearest shilling.

Where a taxpayer (a company or an individual) has, in the year of income, paid calls on shares owned by him in a mining or prospecting company, or syndicate, carrying on mining or prospecting operations in Australia for gold, silver, base metals, rare minerals or oil, or in any company (but not a syndicate) carrying on afforestation in Australia as its principal business, the taxpayer is entitled under s. 160AA to a rebate in his asessment of the amount obtained by applying to the amount of the calls a rate equivalent to:

(a) Where the taxpayer is not a company—one-third of the personal exertion rate, plus 18d. in £, appropriate to taxpayer's total taxable income; or

(b) Where the taxpayer is a company—one-third of the rate of Commonwealth ordinary income tax payable by companies for the year of tax (the present rate of ordinary income tax is 6s. in £. The rebate to a company in respect of calls is therefore calculated at 2s. in £.).

Section 160AE (b) provides that super tax and undistributed profits tax shall not be taken into account in calculating the rebate allowed to companies.

N.B.—The rate of ordinary tax payable by companies on income of year ended 30th June, 1948, or substituted accounting period, is 5s. in £ on the first £5,000 of taxable income and 6s. in £ on the excess over £5,000.

Question 3.

A client, who is commencing business with 20 employees, desires information as to his obligations regarding the income tax instalment deduction system.

Advise him fully.

Answer 3.

An employer who, during a period of twelve months ending on 21st May in any year, has ordinarily had in his employment ten or more employees, from whose salary or wages he must make instalment deductions, is required, unless he is already so

Students' Section—continued.

registered, to apply not later than 14th June in that year for registration as a group employer [s. 221F (1)].

A person who commences to carry on a business or becomes an employer and who, in consequence, has in his employement ten or more employees, from whose salary or wages he must make instalment deductions, is required to apply within seven days for registration as a group employer [s. 221F (2)].

Where an employee receives or is entitled to receive from an employer in respect of a week or part thereof salary or wages in excess of £2, the employer must, at the time of paying the salary or wages, make a deduction therefrom at such rate as is prescribed by regulation [s. 221C(1)].

In respect of deductions made from salary or wages, a group employer must, as provided by s. 221F (5):

(a) not later than the seventh day of the month next succeeding a month in which he has made deductions, pay to the Commissioner the amount of the deductions so made;

(b) not later than 14th July in each year, issue to each employee a group certificate setting out the total of the amounts of the deductions made by him as a group employer from the salary or wages of that employee during the preceding twelve months ended 30th June;

(c) with seven days after an employee ceases to be employed by him, issue to that employee a group certificate setting out the total of the amounts of the deductions made by him as a group employer from the salary or wages of that employee;

(d) upon production to him by an employee of a certificate of exemption issued under s. 221E, issue to that employee a group certificate setting out the total of the amounts of the deductions made by him as a group employer from the salary or wages of that employee;

(e) not later than 14th August in each year, furnish to the Commissioner—

(i) a copy of each group certificate issued by him to each employee in respect of deductions made by him during the year ended 30th June; and

(ii) a statement reconciling the total of the amounts of the deductions shown in each of those copies of group certificates with the total of the amounts paid to the Commissioner in respect of those deductions.

A group employer must not later than 14th August of each year return to the Commissioner any unused group certificate forms [s. 221F (6)].

The Commissioner may, by notice in writing served on a group employer, vary in any particular case any of the above requirements [s. 221F (7)]. Where the Commissioner acts upon a group certificate which shows an amount to have been deducted in excess of the amount actually deducted, the employer must account to the Commissioner for such excess and the employer's only remedy is against the employee [s. 221F (9)].

Question 4.

A taxpayer is a member of several associations for which he desires to claim any allowable deductions.

Advise him as to the position.

Answer 4.

Where the carrying on of a business, from which assessable income is derived by the taxpayer, is conditional upon membership of an association, e.g. a stock exchange, any periodical subscription paid by him in the year of income in respect of that membership shall be an allowable deduction, to the full extent of the subscription or subscriptions paid in the year of income [s. 73 (1)].

Section 73 (2) provides that where membership of an association is not obligatory, but the association carries out, on behalf of its members, in the year of income, any activity of such a nature that, if carried out by the taxpayer on his own behalf, its expense would be an allowable deduction to him, the taxpayer is entitled to a deduction of such proportion of the subscriptions, levies and contributions paid by him in the year of income as the losses and outgoings incurred by the association in that year in carrying out that activity bear to its total losses and outgoings of that year which are not of a capital nature, subject to a minimum allowance of £10/10/- where the subscriptions etc., paid

Students' Section—continued.

to the association equal or exceed that sum. Where the subscriptions, etc., to the association for the year of income are less than £10/10/-, the actual amount so paid to the association is deductible.

Section 73 (3) permits a deduction up to £10/10/- to any one association of subscriptions not otherwise provided for, which are paid in the year of income to trade, business or professional associations.

It should be particularly noted that the limit of £10/10/- does not apply to the *total* subscriptions paid by a taxpayer during the income year, but to the subscription paid to any single association.

Question 5.

Write a note on "Australian Business Controlled Abroad" as defined in Division 13, including the responsibility for taxation.

Answer 5.

Section 136 provides that, where any business carried on in Australia:

(a) is controlled principally by non-residents;

(b) is carried on by a company a majority of the shares in which is held by or on behalf of non-residents; or

(c) is carried on by a company which holds, or on behalf of which other persons hold, a majority of the shares in a non-resident company,

and it appears to the Commissioner that the business produces either no taxable income or less than the amount of taxable income which might be expected to arise from that business, the person carrying on the business in Australia, shall, notwithstanding any other provisions of the Act, be liable to pay income tax on a taxable income of such amount of the total receipts (whether cash or credit) of the business as the Commissioner determines.

Question 6.

Define "Private Company."

When is a company deemed to be a company in which the public are substantially interested?

Answer 6.

(N.B.—This answer is based on the Income Tax Assessment Act 1936-1947, that is, before the amendments effected by the Income Tax Assessment Act 1948.)

"Private company" is defined in s. 103 (1) by reference to one positive attribute and to an alternative negative attribute:

(i) a company which is under the control of not more than seven persons, and

(ii) which is not a company in which the public are substantially interested, or

(iii) which is not a subsidiary of a public company.

In determining the scope of each of these attributes regard must be had to the following provisions:

(i) Section 103 (2) (c) which provides that a company shall be deemed to be under the control of any persons where the major portion of the voting power or the majority of the shares is held by those persons and nominees of those persons or where the control is, by any other means whatever, in the hands of those persons.

"Nominee" of any person means one who may be required to exercise his voting power at the direction of, or holds shares directly or indirectly on behalf of, that person and includes a relative of that person [s. 103 (1)].

"Relative" means a husband or wife or a relation by blood, marriage or adoption (s. 6).

Persons in partnership and persons interested in the estate of a deceased person or in property held in trust shall respectively be deemed to be a single person [s. 103(2)(d)].

(ii) Section 103 (2) (a) which provides that a company shall be deemed to be a company in which the public are substantially interested if shares of the company (not being shares entitled to a fixed rate of dividend, whether with or without a further right to participate in profits) carrying not less than twenty-five per cent. of the voting power, have been allotted unconditionally to, or acquired unconditionally by, and are at the end of the year of income beneficially held by, the public (not including a private company) and any such shares have in the course

Students' Section—continued.

of that year been quoted in the official list of a stock exchange, not necessarily in Australia.

(iii) Section 103 (2) (b) which provides that a company shall be deemed to be a subsidiary of a public company if, by reason of the beneficial ownership of the shares, the control of the company is in the hands of one or more companies, none of which is a private company.

Question 7.

Are the following subject to taxation in the hands of the recipient:

(a) Alimony received by an ex-wife?

(b) Salary paid to a foreign consul?

(c) Reversionary bonus on a life assurance policy?

Give reasons for your answer.

Answer 7.

(a) Section 23 (1) exempts the income received by way of periodical payments in the nature of alimony or maintenance, by a woman from her husband or former husband: Provided that for the purpose of making such payments the husband, or former husband, has not divested himself of any income-producing assets, or diverted from himself income upon which he would otherwise have been liable to tax. The exemption covers both separation allowances and alimony paid to wives and former wives.

(b) Section 23 (a) (iii) exempts from income tax the official salary of, and the income derived from sources out of Australia by, a foreign consul.

(c) A reversionary bonus on a life assurance policy is not liable to income tax. Section 26 (i), which includes in the assessable income any amount received as or by way of bonus, specifically excludes a reversionary bonus on a policy of life assurance. The definition in s. 6 of "dividend" also excludes a reversionary bonus on a policy of life assurance.

Question 8.

Define "Primary Production."

A Primary Producer is allowed deductions for certain expenditure on land for primary production, many of which are items of a capital nature.

Enumerate these deductions.

Are these deductions allowed when the taxpayer does not own the property?

Answer 8.

"Primary production" means production resulting directly from the cultivation of land or the maintenance of animals or poultry for the purpose of selling them or their bodily produce including natural increase, and includes the manufacture of dairy produce by the person who produced the raw material used in that manufacture (s. 6).

Section 75 provides for an allowance of expenditure incurred in the year of income by a taxpayer engaged in primary production on any land in Australia in:

(a) the eradication or extermination of animal or vegetable pests from the land;

(b) the destruction and removal of timber, scrub or undergrowth indigenous to the land;

(c) the destruction of weed or plant growth detrimental to the land;

(d) the preparation of the land for agriculture;

(e) ploughing and grassing the land for grazing purposes;

(f) the draining of swamp or low-lying lands where that operation improves the agricultural or grazing value of the land;

(g) preventing or combating soil erosion on the land, otherwise than by the erection of fences.

(h) the construction of dams, earth tanks, underground tanks, irrigation channels or similar structural improvements, or the sinking of bores or wells, for the purpose of conserving or conveying water for use in carrying on primary production on the land; and

(i) the construction on the land of levee banks or similar improvements having like uses.

Where the taxpayer is recouped by the Commonwealth, by a State, by a public authority, or by any other persons, in respect of the whole or part of the cost of any of the improvements referred to in new s. 75 (1) (g), (h) or (i), the deduction under s. 75 is reduced to the sum actually borne by the taxpayer himself.

The land on which the expenditure is made need not belong to the taxpayer in

Students' Section—continued.

order to entitle him to the deduction allowed by s. 75.

Section 76 provides that where any taxpayer proves to the satisfaction of the Commissioner that:

(a) he is carrying on agricultural or pastoral pursuits in a district which is subject to the ravages of animal pests; and

(b) he has expended for, or entered into a contract or undertaking with the Government or an authority of a State for, the purchase of wire or wire netting for use in the construction or alteration of a fence to prevent animal pests entering upon the land used by him in the production of assessable income,

the following amount shall be an allowable deduction:

(c) such amount as the Commissioner is satisfied has been expended by that taxpayer in the purchase of the wire or wire netting placed by him in position on the fence in the year of income and in so placing the wire or wire netting in position; or

(d) where the taxpayer purchased the wire or wire netting under a contract or undertaking with the Government, or an authority, of a State (e.g., in terms of the New South Wales Pastures Protection Act) the amount paid by him in respect of that wire or wire netting, in the year of income, as instalments of purchase money or interest thereon, and the amount, if any, expended by him in that year in placing the wire or wire netting in position on the fence.

BOOK REVIEW

Accounts from Incomplete Records, Second Edition, by JOHN G. SIMPKINS. Gee & Company (Publishers) Limited, London (pp. 64).

This work sets out to assist those who might be confronted with the task of preparing Accounting Reports from recorded information which is inadequate in varying degrees. Most students will be familiar with those exercises dealing with incomplete accounting records, and doubtless have often wondered how some of the information given in such questions would be procured in practice. This little work, in its earlier pages, goes far in explaining what can be done to this end. It proceeds to explain and illustrate how the information might be recorded in an incomplete system. Useful applications of the technique of control accounts are described.

The pages dealing with the preparation of final accounts do not contain the references to form and classification with which we have become familiar, and in some cases the terminology is loose. It is surprising to find a Trading Account for presentation to a proprietor illustrated with closing stock on the credit side.

A good deal of emphasis is placed on Income Tax considerations, and one chapter is given over to statutory provisions as to books and accounts. Australian readers will realize that these matters have specific reference to English legislation, and do not necessarily apply in this country.

L. H. DILLON.

LEGAL SECTION

Edited by

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TRUSTEE COMPANY'S COMMISSION ON INCOME FROM A BUSINESS

A testator, who died in 1926, appointed as executors and trustees his widow, his son and the Union Trustee Co. of Australia Ltd. The testator owned two grazing properties in Victoria. The trustees exercised the discretion vested in them to postpone the sale of these properties and continued to carry on the business of grazing until the properties were sold, one 1931 and the other in 1944. The method of accounting adopted by the trustees was as follows. In respect of each station, a separate livestock account was kept for sheep, cattle and horses. These accounts recorded the livestock on hand at the beginning of each year and the purchases, natural increase, and reductions by sale or slaughter during the year, and the resultant surplus or deficit was carried into the revenue accounts which took the form of, first, a working account for each station and secondly, a combined trust income account. In the working accounts, the proceeds of sale of wool and other station produce were combined with the balance from the livestock accounts, and from the aggregate thus obtained was deducted outgoings, including the costs and expenses of and incidental to working and managing the station properties. The balance of the working accounts was carried to the trust income account where the other revenues of the trustees, such as rents and dividends, were added and general expenses and outgoings, including interest on borrowed money and trustees' commission on income, were deducted and the balance, being the amount available for beneficiaries, was transferred to their accounts.

The commission charged by the trustee company annually in the accounts was always based upon the aggregate of the items brought into the working account and the trust income account and was calculated before deducting any of the costs and expenses which were deducted in those accounts for the purpose of ascertaining the net income.

Doubts having arisen upon the question as to what commission the trustee company was entitled to charge in respect of the income of the trust property, proceedings were commenced by originating summons in the Supreme Court of Victoria. The point at issue was what upon the true construction of s. 17 of the Victorian Trustee Companies Act, 1928, was the meaning of the words "income received by such trustee company as executor administrator trustees etc." where they occur in that section. The Victorian Full Court held (by majority; Martin, J., dissenting) that the income on which a trustee company was entitled to receive commission was all amounts, other than capital receipts, received by it from any part of the estate without deducting therefrom any amount for expenses or outgoings paid by it out of the estate. The High Court of Australia reversed this decision, and held that for the purpose of ascertaining the income in respect of which the trustee company was entitled to charge commission the amount of profit appearing from the livestock accounts the gross amount arising from the sale of wool and any other proceeds of sale of produce of the business should be credited and there should be debited the costs and expenses incurred for the working and managing of the station properties.

On appeal to the Privy Council, the judgment of the High Court was upheld (*The Union Trustee Co. of Australia Ltd.* v. *Bartlam and Others;* 23 July, 1948).

The following is an extract from the judgment of the Privy Council:

"From the statement that has already been made of the questions raised and the declarations made by the Supreme Court of Victoria and the High Court of Australia it is clear that however much the argument may be elaborated the narrow point is what upon the true construction of section 17 of the Act is the meaning of

Legal Section—continued.

the words "income received by such trustee company as executor administrator trustee, etc." where they occur in that section. Whatever view may be taken of the meaning of those words, there may be difficulty in its application to particular circumstances, but it may be said generally that the difference of opinion between the Supreme Court of Victoria and the High Court of Australia lies in the fact that the latter Court holds that in relation to a business carried on by a trustee company the relevant words mean an amount which cannot be ascertained until the expenses of carrying it on so far as they are chargeable to revenue have been brought into account.

"With the conclusion of the High Court their Lordships are in full accord. But as the question is said to be one of general importance in Australia they think it right to make these observations.

"They would first observe that neither in section 17 nor in any other section of the Act is there any reference to a business being carried on by a trustee company. An executor or trustee has generally no power to carry on his testator's business except so far as is necessary for winding it up, unless the will itself authorises him to do so. It is therefore not surprising that the section which provides for remuneration does not expressly deal with the case where the trust property consists of a business which the trustee company is authorised to carry on. Their Lordships have no doubt that, had such a case been within the contemplation of the Legislature, special provision would have been made for it and the ambiguity, which has caused a difference of opinion in the Courts of Australia, would have been avoided. Meaning and effect must however be given to the section in an unforeseen context and the question is what is income received by a trustee company as trustee where it carries on a business. The nature of the business, trading, manufacturing or merchanting, and the method of accounting adopted in any particular case are alike irrelevant to this question of construction.

"It appears to their Lordships that there are only two possible meanings that can be attributed to the relevant words; (*a*) that they include all receipts properly entered on the revenue side of the account of the business or (*b*) that they mean the balance of profits and gains ascertained according to ordinary methods of accountancy. To the first of these meanings the trustee company is logically driven and indeed commits itself in the formal reasons of the case that it presents to the Board. But, as appears from the statement already made of the method of accounting adopted by it, there is brought into the account as income any surplus on the livestock accounts which is reached not by any cash receipts but as the result of a calculation of numbers of livestock and an arbitrary though convenient valuation of them. No doubt is cast upon the propriety of this method of accounting whether for tax purposes or as between the persons interested in the trust property. But it is clear that, if the meaning of 'income' in section 17 is that for which the trustee company contends, there can be no justification for treating as income that which is a notional profit and nothing more. Rather, to be consistent, the trustee company should, just as it treats as income the gross proceeds of wool, treat also as income the proceeds of sale of every head of stock that it sells, but apart from such sale bring nothing into income account.

"But a construction which leads to such a result, seen indeed in its nakedness in the case of the gross proceeds of sale of wool but even more startling in the case of a business, where the turnover might take place many times in a year, or in the case of a manufacturing business, where the return for each article manufactured might represent a very small margin over the cost of production, is one that their Lordships would not readily adopt where the subject matter is the remuneration of one who stands in a fiduciary relation to his beneficiary. It was urged that if the result was an excessive commission, a remedy was provided by the section in that the beneficiary might apply to the Court for its reduction. But this does not appear to be an adequate justification for adopting such a construction, if another is reasonably tenable.

"Their Lordships then turn to the alternative suggested construction. Since

Legal Section—continued.

it is the income of the trust property upon which a commission is chargeable and *ex hypothesi* the trust property is a business and there need be no other trust property, it is difficult to avoid the conclusion that the section must *propter subjectam materiam* be read as referring to the income of or from the business received by the trustee. In other contexts the word 'income' may bear other meanings, but that in relations to a business it means substantially the balance of profits and gains which results from carrying on that business appears to be indisputable. It is true that in *Lawless* v. *Sullivan* 6 A.C. 373, where it was said, 'There can be no doubt that in the natural and ordinary meaning of language the income of a bank or trade in any given year would be understood to be the gain if any resulting from the balance of the profit and losses of the business in that year' the context was an Income Tax Act. But it appears to their Lordships that, whatever the context, if the question is asked, what is the income of or from a business, the answer must be substantially the same, and it neither adds to nor detracts from that meaning that the words 'received by the trustee' follow. Their Lordships then conclude that in its present context the word 'income' in relation to a business is used in what they concur in thinking is its natural and ordinary, or (as Martin J. said in the Supreme Court) in its popular, meaning. If so, it is not disputable that in the present case it can only be ascertained, as the Order of the High Court directs, upon ordinary accounting principles and in particular after debiting the costs and expenses of working and managing the station properties.

"It was urged against this view that the result might be that in a bad year the trustee company would as the reward of much hard work and anxiety get little remuneration or none at all. This argument is of little weight. It is not obligatory on a trustee company to accept a trust. If it appears likely, taking one year with another, to be unremunerative, it can decline to do so. And, as a practical matter, it will usually be consulted before appointment and may then bargain for proper remuneration, if it is to undertake the carrying on of a business. The section itself contemplates and permits such an event.

"No cross appeal having been raised, their Lordships think it unnecessary to say more than that they respectfully concur in the views expressed by the High Court that none of the items mentioned in question 1 (*d*) of the originating summons is deductible in ascertaining the income upon which commission is chargeable.

"Their Lordships would not be thought wanting in respect to the learned Judges of the High Court, if they do not fully discuss the reasoning which has led them to the same conclusion as that now adopted. It is significant that the result is the same. For this is just because income in its 'natural and ordinary' meaning is an amount that is only ascertainable by the process which is elaborately pursued in the judgments of Latham, C.J., and Dixon, J., and particularly by making the adjustments between capital and income which are a familiar feature of proper accountancy. They adopt as a summary of their own views the words of Dixon, J., 'the gross returns from the pastoral business forming part of the estate cannot properly be described as income and it is only the net balance ascertained according to the usual and recognized principles of accounting that answers the description'."

End Pages

by

Angus Lancaster

I have been warned off the accountancy course. The doctors have taken swabs and find that I have been doped with excessive work and bad living. Out for life is the sentence. The days that are left are to be spent in snoring, reading and keeping out of mischief. However, the kind-hearted Editor of this Journal has let me creep back under the fence and occupy a page or two at the end of each issue. As I cannot instruct, I must try to entertain. What sort of entertainment? I believe Desmond MacCarthy supplies the answer when he says, "Only a few have learned enough to become cultivated. Many are educated indeed, very well informed in particular directions. Their minds may be vigorous but there is too little idle information about life littering their memories." Here is a noble aim, and if I fail, be kind to me. In the words of the immortal notice—"Don't shoot the man at the piano; he is doing his utmost." Also remember that I am unstipended. Neither the Institute nor the publishers could possibly pay money for "idle information about life" as seen by an enthusiastic but decrepit amateur.

There'll Always be a Spiv

The word "Spiv" has, I believe, found a permanent place in the English language. It is characteristic of mankind that the road to the dictionary of the denigratory epithet is much smoother than that of its laudatory antonym. It is another truism that wars are great word-breeders. Although "Spiv" like "Quisling" and the rest are products of World War II, the Spiv has always been in our midst and he will breed his kind so long as greed and sloth are ingredients of man's nature.

The Spiv became an urgent problem in fourteenth century England. In the early part of that century the lord of the manor was on top. The vellein was breeding so fast that there was a surplus of farm labour; the competition for land was keen, and the lord could drive a hard bargain. He could enforce and enlarge the prevailing conditions of slavery which took the form of service on the lord's own manor farm as the price the serf had to pay for the right to till his meagre strips of agricultural land.

The Black Death (1348-1349) changed all that. At least a third and possibly nearly one half of the people of England died in two years. Now the peasant had the whip hand; the lord had not enough slaves to work his home farm; the price of free labour rose sharply. The slaves who were left were naturally reluctant to pay their rent in compulsory "work days" on the demesne land when they could get so much more in cash for their labour from competing employers. Many slaves, mostly the single ones who could move faster, broke their bonds and "fled" to the other side of the forest where they were welcomed with open arms and no questions asked.

This sounds very modern. History never exactly repeats itself, but it does its best. Easy money unsettled the new class of landless labourer; the incentive of starvation disappeared; prices rose; wages rose faster still. As Piers Plowman put it, labourers who had no land to live on but their hands will not dine to-day on "worts a night old" (stale cabbage) and cold bacon. He demanded "fresh flesh or fish fried or baked" and "chaude or plus chaude" (hot and hotter still) and if he didn't get what he wanted, if he were not "highly hired", then "curseth he the King and all his council after such laws to loke (enforce) labourers to greeve". In this state of fourteenth century affairs we find the birth of "inflation", "shortages", "staff-pinching", "incentive payments", the "free hair-do", "music while you loaf", "attendance money", "absenteeism", crook backs that

End Pages—continued.

can only be healed by a day in the surf; in short, the perfect breeding ground for the Spiv.

Now, as was natural, the "King and all his council" became very nervous at being "cursed". Parliament, consisting entirely of employers, retaliated by passing the Justices of the Peace Act of 1360. According to Dalton's "Countrey Justice" the Act was aimed at rioters and barraters, night-walkers, eavesdroppers and common gamesters, but above all at Spivs, who were then perfectly described as "suspected persons who live idly yet fare well, or are well apparelled, having nothing whereon to live."

According to London reports, the word "Spiv" was coined by Scotland Yard from the initial letters of "suspected persons" of the 1360 Act and "itinerant vagrants". It is hoped that when "spiv" is incorporated in the Oxford English Dictionary acknowledgments will be paid to Dalton's ancient authority.

The habit of coining words from the initial letters of institutions, slogans and the like has grown apace since World War I. In 1917 the Bolsheviks came out with their slogan, "Workers of the World, Unite." In 1919 the Germans followed it up with:

Schieber
Aller
Länder
Vereinigt
Euch

At the time the word "Schieber" was translated into English as "profiteer" but, in fact, it bears a much closer resemblance to "Spiv". Thus the sentence should be translated, "Spivs, in all lands, unite!" From the initials of this slogan the Germans coined the word "Salve". Let this be the password of the Spivs: "Salve! Salve!"

Politeness Does Not Always Pay

A cheque is a "bill of exchange" drawn on a banker, payable on demand. A bill of exchange is an "unconditional order" in writing . . . requiring the person to whom it is addressed to pay . . . a sum certain in money. The definition of a bill of exchange applies to cheques.

The London *Times* recently made a plea for the "small change of conventional courtesy" and cited with approval the example of a gentleman who always wrote "please" before "pay" on his cheques.

In *Little* v. *Slackford* ((1828) Moody and Malkin 171), the English Courts were asked to decide whether the following document constituted a valid bill of exchange:

> "Mr. Little, please to let the bearer have seven pounds and place it to my account, and you will oblige
>
> Your humble servant,
> R. SLACKFORD."

The Court decided that this was not a valid bill of exchange. "The paper", said Lord Tenterden, C.J., "does not purport to be a demand made by a party having a right to call on the other to pay."

Mr. Nigel Bridge, a member of the English Bar, cited the above case in a letter to the *Times* and contended that in view of the Court's decision, we must perforce go on being abrupt with our bankers.